NCBI PubMed National Library of Medicine NLM

PubMed Nucleotide Protein Genome Structure PMC Taxonomy OMIM Books

Search PubMed for recombinant HCV E1 Preview Go

Clear

Limits Preview/Index **History** Clipboard Details

- Search History will be lost after one hour of inactivity.
- To combine searches use # before search number, e.g., #2 AND #6.
- Search numbers may not be continuous; all searches are represented.

Entrez PubMed

PubMed Services

Search	Most Recent Queries	Time	Result
#16	Search **recombinant HCV E1** Field: **All Fields,** Limits: **Publication Date to 1994/07/15**	12:47:56	1
#15	Search **recombinant HCV E1**	12:47:27	13
#7	Search **Maertens G HCV**	12:45:01	45
#6	Search **Maertens G**	12:35:19	56
#5	Search **HCV E1 and vaccinia**	12:34:41	2
#3	**Related Articles** for **PubMed** (Select **8411378**)	12:33:19	137
#1	Search **ralston R 1993**	12:25:51	4

Clear History

Related Resources

Write to the Help Desk
NCBI | NLM | NIH
Department of Health & Human Services
Freedom of Information Act | Disclaimer

WEST Search History

DATE: Thursday, February 20, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L2	L1 and HCV	16	L2
L1	Maertens G.in.	22	L1

END OF SEARCH HISTORY

WEST Search History

DATE: Thursday, February 20, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L6	L5 and L4	36	L6
L5	vaccinia adj vector	407	L5
L4	recombinant and L3	321	L4
L3	HCV and envelope adj protein	385	L3
L2	L1 and HCV	16	L2
L1	Maertens G.in.	22	L1

END OF SEARCH HISTORY

Li 09/899,303

?show files
File 155:MEDLINE(R) 1966-2002/Sep W5
File 5:Biosis Previews(R) 1969-2002/Sep W5
(c) 2002 BIOSIS
File 10:AGRICOLA 70-2002/Sep
(c) format only 2002 The Dialog Corporation
File 34:SciSearch(R) Cited Ref Sci 1990-2002/Oct W1
(c) 2002 Inst for Sci Info
File 35:Dissertation Abs Online 1861-2002/Sep
(c) 2002 ProQuest Info&Learning
File 50:CAB Abstracts 1972-2002/Sep
(c) 2002 CAB International
File 65:Inside Conferences 1993-2002/Oct W1
(c) 2002 BLDSC all rts. reserv.
File 71:ELSEVIER BIOBASE 1994-2002/Oct W1
(c) 2002 Elsevier Science B.V.
File 73:EMBASE 1974-2002/Sep W5
(c) 2002 Elsevier Science B.V.
File 94:JICST-EPlus 1985-2002/Aug W1
(c)2002 Japan Science and Tech Corp(JST)
File 144:Pascal 1973-2002/Oct W1
(c) 2002 INIST/CNRS
File 149:TGG Health&Wellness DB(SM) 1976-2002/Sep W5
(c) 2002 The Gale Group
File 342:Derwent Patents Citation Indx 1978-01/200224
(c) 2002 Thomson Derwent
File 345:Inpadoc/Fam.& Legal Stat 1968-2002/UD=200239
(c) 2002 EPO
File 347:JAPIO Oct 1976-2002/Jun(Updated 021004)
(c) 2002 JPO & JAPIO
File 351:Derwent WPI 1963-2002/UD,UM &UP=200263
(c) 2002 Thomson Derwent
File 357:Derwent Biotech Res. _1982-2002/JUNE W1
(c) 2002 Thomson Derwent & ISI
File 440:Current Contents Search(R) 1990-2002/Oct 08
(c) 2002 Inst for Sci Info
?ds

Set Items Description

S1 1179 (HEPATITUS(W)C(W)(VIRAL OR VIRUS) OR HCV)(S)ENVELOPE?(W)PR-
OTEIN?
S2 357 RD (unique items)
S3 4 S2 AND RECOMBINANT(W)VECTOR?
S4 120 S2 AND RECOMBINANT?
S5 4 S3 AND (PREP? OR PRODUCT? OR MANUF? OR PURIF?)
?t5/3 ab/1-4
>>>No matching display code(s) found in file(s): 65, 342, 345

5/AB/1 (Item 1 from file: 345)
DIALOG(R)File 345:Inpadoc/Fam.& Legal Stat

12871931
Basic Patent (No,Kind,Date): CA 2172273 AA 19960215 <No. of Patents: 016>
PURIFIED HEPATITIS C VIRUS ENVELOPE PROTEINS FOR DIAGNOSTIC AND
THERAPEUTIC USE (English; French)
Patent Assignee: INNOGENETICS NV (BE)
Author (Inventor): MAERTENS GEERT (BE); BOSMAN FONS (BE); DE MARTYNOFF GUY
(BE); BUYSE MARIE-ANGE (BE)
IPC: *C12N-015/51; C07K-014/18; C07K-016/10; C07K-001/113; A61K-039/42; A61K-039/29; G01N-033/577; G01N-033/576
Derwent WPI Acc No: *C 96-129401;
Language of Document: English
Patent Family:

Patent No	Kind	Date	Applic No	Kind	Date	
AT 217345	E	20020515	EP 95930434	A	19950731	
AU 9533824	A1	19960304	AU 9533824	A	19950731	
AU 708174	B2	19990729	AU 9533824	A	19950731	
BR 9506059	A	19971028	BR 95U6059	A	19950731	
CA 2172273	AA	19960215	CA 2172273	A	19950731	(BASIC)
DE 69526636	C0	20020613	DE 69526636	A	19950731	
DK 721505	T3	20020819	DK 9595930434	A	19950731	
EP 721505	A1	19960717	EP 95930434	A	19950731	
EP 1211315	A1	20020605	EP 2002003643	A	19950731	
EP 721505	B1	20020508	EP 95930434	A	19950731	
JP 9503396	T2	19970408	JP 95506189	A	19950731	
SG 7100728	A1	20000418	SG 9703877	A	19950731	
US 6150134	A	20001121	US 612973	A	19960311	
US 6245503	BA	20010612	US 927597	A	19970911	
WO 9604385	A2	19960215	WO 95EP3031	A	19950731	
WO 9604385	A3	19960307	WO 95EP3031	A	19950731	

Priority Data (No,Kind,Date):

EP 94870132 A 19940729
WO 95EP3031 W 19950731
EP 95930434 A 19950731
EP 2002003643 A 19950731
EP 95930434 A3 19950731
US 927597 A 19970911
US 612973 A3 19960311

5/AB/2 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI

013718704
WPI Acc No: 2001-202934/200120
XRAM Acc No: C01-060329
XRPX Acc No: N01-144769
Novel protein chip comprising several probe proteins fixed in a defined arrangement on a microsolid substrate useful for mass diagnosis or analysis of target proteins in test samples quantitatively or qualitatively
Patent Assignee: DIACHIP LTD (DIAC-N); KIM S Y (KIMS-I)
Inventor: KIM S Y; PARK E J; YOON G J; KIM S; PARK E; YOON K
Number of Countries: 094 Number of Patents: 003
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
WO 200114425 A1 20010301 WO 2000KR928 A 20000819 200120 B
KR 2000071894 A 20001205 KR 9934427 A 19990819 200131
AU 200067356 A 20010319 AU 200067356 A 20000819 200136

Priority Applications (No Type Date): KR 9934427 A 19990819
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200114425 A1 E 59 C07K-017/00
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
KR 2000071894 A C07K-017/00
AU 200067356 A C07K-017/00 Based on patent WO 200114425

Abstract (Basic): WO 200114425 A1

Abstract (Basic):

NOVELTY - Protein chip (I) for mass diagnosis or analysis of test samples (T), has microsolid substrate (MSS) on which many spots of probe proteins (II) are fixed in defined arrangement, is new. 0.1 pg of (II) which is an antigen, receptor or enzyme is fixed per spot on MSS via bonds between amino groups of (II) and functional groups of chemicals coated on MSS. (II) is capable of binding to target proteins in (T).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) manufacturing (I) involves the following:

(i) arraying mixtures of a coating buffer and one or more kinds of (II) at predetermined locations on MSS, with the quantity of the proteins per spot of 0.1 pg or more;

(ii) immobilizing (II) by incubating the substrate at room temperature;

(iii) fixing (II) on the substrate by immersing the substrate in 100% ethanol; and drying the substrate; and

(2) an automated system (III) for diagnosing in several subjects comprises (I) and the following:

(i) a first microarrayer capable of arraying one or more (II) in several spots on (I);

(ii) the second microarrayer controlled to perform sequentially allotting test samples exactly to the locations at which (II) is fixed on (I);

(iii) washing (I) after reaction, and adding secondary antibodies to react with target proteins in (T); and

(iv) a fluorescence microscope or a micro chip reader for detecting the reaction between (II) and the target proteins.

USE - (I) is useful for analyzing target proteins present in (T) quantitatively or qualitatively which involves:

(i) reacting (T) with (I);

(ii) washing (I);

(iii) reacting (I) obtained with fluorescence substance (preferably, fluorescein isothiocyanate (FITC))-conjugated secondary antibodies specific for a target protein which is capable of binding (II) fixed on (I); and

(iv) detecting the reaction signals with a fluorescence microscope or a microchip reader.

(I) In this case, has antigenic proteins relating to two or more diseases fixed in divided sectors on it, so that each sector contains proteins different from those on other sectors, (T) is serum of a subject and the reaction signals detected with a fluorescence microscope or a microchip reader refer to diagnostic indications for the diseases in the subject. Alternately, (I) comprises antigenic proteins relating to a disease and test samples are sera of two or more

subjects, and the reaction signals detected with a fluorescence microscope or a microchip reader refer to diagnostic indications for the diseases in the subjects. Optionally, (I) comprises antigenic proteins relating to two or more diseases and test samples are sera of two or more subjects, and the reaction signals detected with a fluorescence microscope or a microchip reader refer to diagnostic indications for the diseases in the subjects. The third step of the method is performed by an automatic microarrayer system (claimed).

(I) has a wide range of applicability such as diagnosis of various kinds of metabolic diseases and viral or bacterial infections, and screening of antagonist useful for the development of new medicines different from the DNA chip used for the genetic analysis or diagnosis of diseases caused by genetic abnormalities. (I) in addition to clinical diagnosis can also be used in researches for the kinetics of enzymatic reactions and screening antagonist or ligands which binds to the receptors of interest.

ADVANTAGE - (I) enables multipurpose diagnosis of various diseases even with the small amount of samples for a number of subjects at a time, with a high throughput. (I) includes feasibility for automation and rapidity of the diagnostic processes, and possibility of constructing profiles of specific diseases. Many samples can be analyzed at a time with high accuracy. The chip can perform simultaneously the diagnosis of several diseases in a subject, of one disease in several subjects and of several diseases in several subjects. The highly integrated structure of (I) makes a biochemical or immunological assay faster suitable for automatization, precise and easy to handle. The automatic diagnostic system using (I) is more efficient in terms of time, labor, and resources other than enzyme linked immunosorbant assay (ELISA) or chemiluminescence immunoassay (CLIA).

DESCRIPTION OF DRAWING(S) - The figure shows the genome of human immunodeficiency virus used in the method and the cloning regions of gag and env antigens present in it.

pp; 59 DwgNo 1/13

5/AB/3 (Item 1 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0208023 DBA Accession No.: 97-03144 PATENT
New vaccines against hepatitis C virus - recombinant envelope protein production by vector expression in e.g. Escherichia coli, for application as a recombinant vaccine
AUTHOR: Cabezon Silva T; Momin P M; Garcon N M J C
CORPORATE SOURCE: Rixensart, Belgium.

PATENT ASSIGNEE: SK-Beecham-Biol. 1997
PATENT NUMBER: WO 9701640 PATENT DATE: 970116 WPI ACCESSION NO.: 97-100211 (9709)
PRIORITY APPLIC. NO.: GB 9513261 APPLIC. DATE: 950629
NATIONAL APPLIC. NO.: WO 96EP2764 APPLIC. DATE: 960629
LANGUAGE: English
ABSTRACT: The following are claimed: 1) a vaccine composition comprising QS21;3 De-O-acylated monophosphoryl lipid A (3D-MPL), an oil-in-water emulsion which has the following composition -a metabolizable oil, alpha-tocopherol, and Tween-80, and at least 1 immunogen selected from a hepatitis C virus (HCV) core protein or an immunogenic derivative, and a HCV envelope protein or an immunogenic derivative; 2) a compound which comprises an HCV core protein, or an immunogenic derivative fused to a polypeptide containing foreign epitopes; 3) a DNA molecule encoding a compound as in 2); 4) a recombinant vector comprising DNA as in 3); and 5) a host cell transformed with the vector as in 4). The vaccines are preferential stimulators of IgG2a production and TH1 cell response. They can enhance induction of cytolytic T-lymphocyte responses and can also enhance interferon-gamma production . The vaccines can be used for treating or preventing HCV infection. In an example, an expression construct was prepared for expressing a fusion protein which was expressed in Escherichia coli. The fusion protein was added to a composition as in 1) for a recombinant vaccine formulation. (19pp)

5/AB/4 (Item 2 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0193699 DBA Accession No.: 96-05106 PATENT
Purifying recombinant hepatitis C virus (HCV) E1 and E2 envelope proteins - recombinant vaccine production
AUTHOR: Maertens G; Bosman F; De Martynoff G; Buyse M A
CORPORATE SOURCE: Zwijnaarde, Belgium.
PATENT ASSIGNEE: Innogenetics 1996
PATENT NUMBER: WO 9604385 PATENT DATE: 960215 WPI ACCESSION NO.: 96-129401 (9613)
PRIORITY APPLIC. NO.: EP 94870132 APPLIC. DATE: 940729
NATIONAL APPLIC. NO.: WO 95EP3031 APPLIC. DATE: 950731
LANGUAGE: English
ABSTRACT: A new method for purifying hepatitis C virus (HCV) envelope proteins E1, E2 and E1/E2 involves lysing transformed host cells to isolate the recombinantly expressed protein in a disulfide bond cleavage or reduction step using a disulfide bond cleavage agent. Also new are: a composition of purified recombinant HCV single or

specific oligomeric envelope proteins selected from E1 and/or E2 and/or E1/E2; a recombinant vector comprising a vector sequence and an appropriate prokaryote, eukaryote or virus promoter sequence followed by a nucleotide sequence allowing the expression of the envelope proteins ; nucleic acid comprising any of the 20 nucleotide sequences disclosed or their fragments; a recombinant vector carrying the nucleic acid; a host cell transformed with at least 1 of the new vectors; recombinant E1 and/or E2 and/or E1/E2 expressed by the host cells; a composition of epitope D, epitope F, epitope H (or C) and epitope I recognized by monoclonal antibodies (MAbs) 15C8C1, 12D11F1 and 8G10D1H9, 9G3E6, 10D3C4 and 4H6B2, and 17F2C2, respectively; and E1 and E2 specific MAbs. The proteins may be used in recombinant vaccines and the MAbs are diagnostic. (146pp)

```
?ds

Set    Items  Description
S1      1179  (HEPATITUS(W)C(W)(VIRAL OR VIRUS) OR
HCV)(S)ENVELOPE?(W)PR-
         OTEIN?
S2       357  RD (unique items)
S3         4  S2 AND RECOMBINANT(W)VECTOR?
S4       120  S2 AND RECOMBINANT?
S5         4  S3 AND (PREP? OR PRODUCT? OR MANUF? OR PURIF?)
?s s2 and (diag? or therap? or medic? or pharm?)
Processing
Processing
Processing
Processed  10 of  18 files ...
Processing
Processing
Processing
Completed processing all files
         357  S2
     8173474  DIAG?
     7971468  THERAP?
     8532064  MEDIC?
     6097846  PHARM?
    S6   172  S2 AND (DIAG? OR THERAP? OR MEDIC? OR PHARM?)
?s s6 not s5
         172  S6
           4  S5
    S7   168  S6 NOT S5
?s s7 and (
>>>Possible typing error near start of command
?s s7 and (vaccin? or immuno?)
>>>File 155 processing for IMMUNO? stopped at IMMUNOFENOTYPOWE
```

>>>File 5 processing for IMMUNO? stopped at IMMUNOFLUORESCENCE
>>>File 34 processing for IMMUNO? stopped at IMMUNOHITOCHEMICAL
>>>File 71 processing for IMMUNO? stopped at IMMUNOTECHNOLOGY
>>>File 73 processing for IMMUNO? stopped at IMMUNOFIXATIOIN
Processing
Processed 10 of 18 files ...
>>>File 144 processing for IMMUNO? stopped at IMMUNOGENICAL
>>>File 440 processing for IMMUNO? stopped at IMMUNOLGICALLY
Completed processing all files
168 S7
710077 VACCIN?
3402582 IMMUNO?
S8 105 S7 AND (VACCIN? OR IMMUNO?)
?s s7 (s)(vaccin? or immuno?)
>>>File 155 processing for IMMUNO? stopped at IMMUNOFENOTYPOWE
>>>File 5 processing for IMMUNO? stopped at IMMUNOFLUORESCENCE
>>>File 34 processing for IMMUNO? stopped at IMMUNOHITOCHEMICAL
>>>File 71 processing for IMMUNO? stopped at IMMUNOTECHNOLOGY
>>>File 73 processing for IMMUNO? stopped at IMMUNOFIXATIOIN
>>>File 144 processing for IMMUNO? stopped at IMMUNOGENICAL
>>>File 440 processing for IMMUNO? stopped at IMMUNOLGICALLY
168 S7
710077 VACCIN?
3402582 IMMUNO?
S9 100 S7 (S)(VACCIN? OR IMMUNO?)
?t9/3 ab/1-10
>>>No matching display code(s) found in file(s): 65, 342, 345

9/AB/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

13534769 22202927 PMID: 12213395
DNA-based vaccination against hepatitis C virus (HCV): effect of expressing different forms of HCV E2 protein and use of CpG-optimized vectors in mice.
Ma Xiaoying; Forns Xavier; Gutierrez Robin; Mushahwar Isa; Wu Tong; Payette Paul; Bukh Jens; Purcell Robert; Davis Heather
Loeb Health Research Institute, 725 Parkdale Avenue, Ont., K1Y 4E9, Ottawa, Canada
Vaccine (Netherlands) Sep 10 2002, 20 (27-28) p3263, ISSN 0264-410X. Journal Code: 8406899
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: In Process
DNA-based immunization may be of prophylactic and therapeutic value for

hepatitis C virus (HCV) infection. In efforts to improve the immunogenicity of a plasmid expressing the second envelope protein (E2) of HCV , we evaluated in mice the role of the antigen localization and demonstrated that membrane-bound and secreted forms induced higher titers of E2-specific antibodies, as well as earlier and higher seroconversion rates, than the intracellular form, but all three forms induced strong CTL. We also investigated whether E2-specific antibody responses could be enhanced by CpG optimization of the plasmid backbone and showed that removal of neutralizing CpG dinucleotides did not have a significant effect but addition of 64 immunostimulatory CpG motifs significantly enhanced anti-E2 titers. These results may have implications for the design and development of HCV DNA vaccines .

9/AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

13184164 21400674 PMID: 11509874
Studies of hepatitis C virus in chimpanzees and their importance for vaccine development.
Bukh J; Forns X; Emerson S U; Purcell R H
Hepatitis Viruses and Molecular Hepatitis Sections, Laboratory of Infectious Diseases, NIAID, National Institutes of Health, Bethesda, Md 20892-0740, USA. jbukh@niaid.nih.gov
Intervirology (Switzerland) 2001, 44 (2-3) p132-42, ISSN 0300-5526 Journal Code: 0364265
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Persistent infection with hepatitis C virus (HCV) is an important cause of chronic liver disease worldwide. Therefore, the development of vaccines to prevent HCV infection, or at least to prevent progression to chronicity, is a major goal. Potential HCV vaccine candidates include recombinant proteins, recombinant viruses, DNA constructs, synthetic peptides and virus-like particles. Various vaccine candidates have been shown to generate humoral and cellular immune responses in animals, primarily in mice. However, the efficacy of most vaccine candidates in protecting against HCV has not been tested because the chimpanzee, the only animal other than humans that is susceptible to HCV , is not readily available, requires special facilities, and is very expensive. The course of infection in chimpanzees is similar in its diversity to that in humans and detailed studies in this model are beginning to define the immune responses that can terminate HCV infection. Of relevance for vaccine evaluation was the titration in chimpanzees of different HCV variants to provide well-characterized challenge pools. In addition, monoclonal virus

pools generated from chimpanzees infected with cloned viruses make it possible now to examine immunity to HCV without the confounding factor of antigenic diversity of the challenge virus (quasispecies). The vaccine trials performed in chimpanzees to date all have tested the efficacy of immunizations with various forms of the envelope proteins of HCV.

9/AB/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

13005344 21874833 PMID: 11878905
Live and killed rhabdovirus-based vectors as potential hepatitis C vaccines.
Siler Catherine A; McGettigan James P; Dietzschold Bernhard; Herrine Steven K; Dubuisson Jean; Pomerantz Roger J; Schnell Matthias J
The Dorrance H. Hamilton Laboratories, Thomas Jefferson University, Philadelphia, Pennsylvania 19107, USA.
Virology (United States) Jan 5 2002, 292 (1) p24-34, ISSN 0042-6822
Journal Code: 0110674
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
A highly attenuated, recombinant rabies virus (RV) vaccine strain-based vector was utilized as a new immunization strategy to induce humoral and cellular responses against hepatitis C (HCV) glycoprotein E2. We showed previously that RV-based vectors are able to induce strong immune responses against human immunodeficiency virus type I (HIV-1) antigens. Here we constructed and characterized three replication-competent RV-based vectors expressing either both HCV envelope proteins E1 and E2 or a modified version of E2 which lacks 85 amino acids of its carboxy terminus and contains the human CD4 transmembrane domain and the CD4 or RV glycoprotein cytoplasmic domain. All three constructs stably expressed the respective protein(s) as indicated by Western blotting and immunostaining. Moreover, surface expression of HCV E2 resulted in efficient incorporation of the HCV envelope protein regardless of the presence of the RV G cytoplasmic domain, which was described previously as a requirement for incorporation of foreign glycoproteins into RV particles. Killed and purified RV virions containing HCV E2 were highly immunogenic in mice and also proved useful as a diagnostic tool, as indicated by a specific reaction with sera from HCV -infected patients. In addition, RV vaccine vehicles were able to induce cellular responses against HCV E2. These results further suggest that recombinant RVs are potentially useful vaccine vectors against important human viral diseases.

9/AB/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12625786 21568394 PMID: 11711631
Production and characterization of monoclonal antibodies specific for a conserved epitope within hepatitis C virus hypervariable region 1.
Li C; Candotti D; Allain J P
National Blood Service, Division of Transfusion Medicine, East Anglia Blood Centre, Cambridge CB2 2PT, United Kingdom.
Journal of virology (United States) Dec 2001, 75 (24) p12412-20, ISSN 0022-538X Journal Code: 0113724
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Frequent mutations in hypervariable region 1 (HVR1) of the main envelope protein of hepatitis C virus (HCV) is a major mechanism of persistence by escaping the host immune recognition. HVR1 contains an epitope eliciting neutralizing antibodies. This study was aimed to prepare broadly cross-reacting, high-affinity, monoclonal antibodies (MAb) to the HVR1 C terminus of HCV with potential therapeutic neutralizing capacity. A conserved amino residue group of glycine (G) at position 23 and glutamic acid (Q) at position 26 in HVR1 was confirmed as a key epitope against which two MAbs were selected and characterized. MAbs 2P24 and 15H4 were immunoglobulin G1 kappa chain [IgG1(kappa)], cross-reacted with 32 and 30 of 39 random C-terminal HVR1 peptides, respectively, and did not react with other HCV peptides. The V(H) of 2P24 and 15H4 heavy chains originated from Igh germ line v gene family 1 and 8, respectively. In contrast, the V(L) kappa sequences were highly homologous. The affinity (K(d)) of 2P24 and 15H4 (10(-9) or 10(-8) M with two immunizing peptides and 10(-8) M with two nonimmunizing HVR1 peptides) paralleled the reactivity obtained with peptide enzyme immunoassay . MAbs 2P24 and 15H4 captured 25 of 31 (81%) HCV in unselected patients' plasmas. These antibodies also blocked HCV binding to Molt-4 cells in a dose-dependent fashion. The data presented suggest that broadly cross-reactive MAbs to a conserved epitope within HCV HVR1 can be produced. Clinical application for passive immunization in HCV -related chronic liver disease and after liver transplantation is considered.

9/AB/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12523469 21370668 PMID: 11478392
Evasion of host immune surveillance by hepatitis C virus: potential roles

in viral persistence.
Moorman J P; Joo M; Hahn Y S
Division of Geographic Medicine, University of Virginia School of Medicine, and Beirne B. Carter Center for Immunology Research, University of Virginia Health Sciences Center, Charlottesville 22908, USA.
Archivum immunologiae et therapiae experimentalis (Poland) 2001, 49 (3) p189-94, ISSN 0004-069X Journal Code: 0114365
Contract/Grant No.: AI01478; AI; NIAID; AI37569; AI; NIAID
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Hepatitis C virus (HCV) is a major human pathogen that causes mild to severe liver disease worldwide. This positive strand RNA virus is remarkably efficient at establishing chronic infections. In order for a noncytopathic virus such as HCV to persist, the virus must escape immune recognition or evade host immune surveillance. Immune escape via the hypervariable region of the E2 envelope protein has been postulated as one mechanism for HCV persistent infection. Such hypervariability within the E2 protein may be under selective pressure from protective B cell or T cell responses and be able to escape immune recognition by rapid mutation of antigenic site. In addition to antigenic variation, HCV may also suppress immune response, leading to dampening of cellular immunity. This is supported by recent studies in our laboratory demonstrating that the HCV core protein can suppress host immune responses to vaccinia virus by downregulating viral specific cytotoxic T lymphocyte (CTL) responses and cytokine production. An understanding of the mechanisms behind HCV persistence will provide a basis for the rational design of vaccines and novel therapeutic agents targeting human HCV infection.

9/AB/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

12509066 21287784 PMID: 11394572
Predominance of antibodies to hepatitis C virus envelope proteins in various disease statuses of hepatitis C.
Podurl C D; Khanna A; Khundmiri S J; Khaja M N; Kumar K S; Sugunan V S; Habibullah C M; Das M R
Rajiv Gandhi Center for Biotechnology, Trivandrum, Kerala, India.
Acta virologica. English ed (Slovakia) Feb 2001, 45 (1) p1-6, ISSN 0001-723X Journal Code: 0370401
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

The antibody profile to various proteins of hepatitis C virus (HCV) was studied in 113 patients positive for HCV RNA in various disease statuses of hepatitis C (HC). A single peptide (E2/NS1, aa 413-436 of HCV polyprotein) chosen from a conserved region at the C-terminus of the hypervariable region (HVR) HVR1 of HCV was found to be sufficient for reliable diagnosis of the infection, even in the acute phase. Six hundred and one suspected HC cases and 200 voluntary blood donors were tested by this peptide. The sensitivity of detection of HCV antibodies by this peptide did not increase with addition of peptides from other HCV proteins. Our results clearly demonstrate that antibodies to HCV envelope proteins occur in a higher percentage of the infected population than those to other proteins. This emphasizes the necessity of using representative sequences from HCV envelope proteins in diagnostic immunoassays of this viral infection.

9/AB/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11114117 21142829 PMID: 11207320
Characterization of hepatitis C virus core-specific immune responses primed in rhesus macaques by a nonclassical ISCOM vaccine.
Polakos N K; Drane D; Cox J; Ng P; Selby M J; Chien D; O'Hagan D T; Houghton M; Paliard X
Chiron Corp., Emeryville, CA 94608, USA.
Journal of immunology (Baltimore, Md. : 1950) (United States) Mar 1 2001, 166 (5) p3589-98, ISSN 0022-1767 Journal Code: 2985117R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Current therapies for the treatment of hepatitis C virus (HCV) infection are only effective in a restricted number of patients. Cellular immune responses, particularly those mediated by CD8(+) CTLs, are thought to play a role in the control of infection and the response to antiviral therapies . Because the Core protein is the most conserved HCV protein among genotypes, we evaluated the ability of a Core prototype vaccine to prime cellular immune responses in rhesus macaques. Since there are serious concerns about using a genetic vaccine encoding for Core, this vaccine was a nonclassical ISCOM formulation in which the Core protein was adsorbed onto (not entrapped within) the ISCOMATRIX, resulting in approximately 1-microm particulates (as opposed to 40 nm for classical ISCOM formulations). We report that this Core-ISCOM prototype vaccine primed strong CD4(+) and CD8(+) T cell responses. Using intracellular staining for cytokines, we show that in immunized animals 0.30-0.71 and 0.32-2.21% of the circulating CD8(+) and CD4(+) T cells, respectively, were specific for

naturally processed HCV Core peptides. Furthermore, this vaccine elicited a Th0-type response and induced a high titer of Abs against Core and long-lived cellular immune responses. Finally, we provide evidence that Core-ISCOM could serve as an adjuvant for the HCV envelope protein E1E2. Thus, these data provide evidence that Core-ISCOM is effective at inducing cellular and humoral immune responses in nonhuman primates.

9/AB/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10813753 20362763 PMID: 10905089
[Hepatitis C virus]
Le virus de l'hepatite C.
Querenghi F; Zoulim F
INSERM unite 271 151, Lyon.
La Revue du praticien (FRANCE) May 15 2000, 50 (10) p1060-5, ISSN 0035-2640 Journal Code: 0404334
Document type: Journal Article ; English Abstract
Languages: FRENCH
Main Citation Owner: NLM
Record type: Completed
Hepatitis C virus (HCV) is a small enveloped virus whose genome is a RNA molecule encoding a polyprotein that is processed by cellular and viral proteases to produce the 3 structural proteins (the core protein C and the 2 envelope proteins E1 and E2) and the 6 nonstructural proteins (NS2, NS3, NS4A, NS4B, NS5A and NS5B). The HCV genome exhibits a significant genetic heterogeneity. HCV isolates can be divided into genetically distinct groups referred to as genotypes, whereas the population of HCV genomes, within an infected individual, is present as a group of heterogeneous but closely related sequences referred to as quasi-species. Studies of the molecular biology of HCV and of new vaccinal or therapeutic strategies are hampered by the lack of easy to use cellular culture systems and of animal models.

9/AB/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10708327 20236706 PMID: 10776948
Prevalence of hepatitis G virus in healthy children in liver disease, and human immunodeficiency virus-1 infection: response to interferon.
Infante D; Pich M; Tormo R; Sauleda S; Montane C; Esteban J I; Esteban R
Unit of Gastroenterology, Hepatology and Pediatric Nutrition, Hospital Materno Infantil Vall d'Hebron, Autonomus University, Barcelona, Spain.
Journal of pediatric gastroenterology and nutrition (UNITED STATES) Apr

2000, 30 (4) p385-90, ISSN 0277-2116 Journal Code: 8211545
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
.Record type: Completed
BACKGROUND: A new virus of the Flaviviridae family, the hepatitis G virus (HGV/HGBV-C), has been identified recently. The purpose of this study was to determine the prevalence of HGV infection in healthy children, in patients with liver disease, and in human immunodeficiency virus (HIV)-1-infected patients. The role of HGV in the clinical course of chronic HCV , the response to interferon-alpha2b, and the possible implications of intravenous gamma-globulin in the transmission of the virus were also evaluated. METHODS: Fifty healthy children, 66 patients with a variety of liver diseases, 19 patients with acquired immune deficiency syndrome (AIDS), and various batches of commercial intravenous immunoglobulins were investigated. Viral HGV RNA (5'NCR-NS5) and anti-HGV envelope protein E2 were assayed. RESULTS: The prevalence of HGV infection was 6% in the healthy children and 42% in the liver disease group. Viremia and anti-E2 were found in 11% and 79% of patients with AIDS. Four (27%) of 15 patients with chronic HCV , receiving treatment with interferon, were coinfected by HGV and became HGV-RNA negative during therapy . One year after the end of interferon therapy , three of them were again HGV RNA positive. CONCLUSIONS: The prevalence of HGV infection is high in healthy children higher in children affected with liver disease, but its potential pathologic implication is questionable, and further studies are warranted. Hepatitis G virus is sensitive to interferon therapy , although the infection often recurs after discontinuation of treatment.

9/AB/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10681857 20223847 PMID: 10760028
The hepatic flaviviridae: summary.
Sherlock S
Royal Free Hospital School of Medicine, Royal Free Hospital, Pond Street, London, UK.
Journal of viral hepatitis (ENGLAND) Jul 1999, 6 Suppl 1 p1-5, ISSN 1352-0504 Journal Code: 9435672
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Hepatitis C envelope proteins (E1, E2) induce protective neutralizing antibodies. The extent of sequence diversity reflects the host's ability to

control viral populations and the response to antiviral therapy . Attempts to prepare effective vaccines against HCV are foiled by lack of prolonged protective immunity. Plasmid vaccines and the use of uninfectious virus-like particles are being developed. HCV induces a cellular humoral immune response, but this is inadequate to clear the virus and the disease becomes chronic. In any patient, the natural history of HCV infection depends on the age when infected, and the presence of other diseases. The transfusion-related disease has a worse prognosis than that transmitted by syringes and needles. The outlook in 'healthy blood donors' is uncertain. Interferon therapy for 3 or preferably 6 months results in a sustained response in about 30% of patients. Negative serum HCV RNA and normal AST values after 3 months of therapy indicates that there may be a sustained response. Whether or not to stop treatment at that time if HCV is still positive remains a matter of debate. The role of interferon treatment in preventing progression to cirrhosis and hepatocellular cancer is still uncertain. Ribavirin therapy alone reduces transaminases and hepatic histology improves. Improved results follow the combination of ribavirin with interferon. Ribavirin may have immuno -modularity and anti-inflammatory actions. Hepatitis G virus (HGV) is unlikely to play a significant role in liver disease in man.

```
?ds

Set    Items  Description
S1      1179  (HEPATITUS(W)C(W)(VIRAL OR VIRUS) OR
HCV)(S)ENVELOPE?(W)PR-
         OTEIN?
S2       357  RD (unique items)
S3         4  S2 AND RECOMBINANT(W)VECTOR?
S4       120  S2 AND RECOMBINANT?
S5         4  S3 AND (PREP? OR PRODUCT? OR MANUF? OR PURIF?)
S6       172  S2 AND (DIAG? OR THERAP? OR MEDIC? OR PHARM?)
S7       168  S6 NOT S5
S8       105  S7 AND (VACCIN? OR IMMUNO?)
S9       100  S7 (S)(VACCIN? OR IMMUNO?)
?
?s s9 and expression?
         100  S9
     4341842  EXPRESSION?
   S10    27  S9 AND EXPRESSION?
?ds

Set    Items  Description
S1      1179  (HEPATITUS(W)C(W)(VIRAL OR VIRUS) OR
HCV)(S)ENVELOPE?(W)PR-
         OTEIN?
S2       357  RD (unique items)
```

S3 4 S2 AND RECOMBINANT(W)VECTOR?
S4 120 S2 AND RECOMBINANT?
S5 4 S3 AND (PREP? OR PRODUCT? OR MANUF? OR PURIF?)
S6 172 S2 AND (DIAG? OR THERAP? OR MEDIC? OR PHARM?)
S7 168 S6 NOT S5
S8 105 S7 AND (VACCIN? OR IMMUNO?)
S9 100 S7 (S)(VACCIN? OR IMMUNO?)
S10 27 S9 AND EXPRESSION?
?t10/3 ab/1-27
>>>No matching display code(s) found in file(s): 65, 342, 345

10/AB/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

13005344 21874833 PMID: 11878905
Live and killed rhabdovirus-based vectors as potential hepatitis C vaccines.
Siler Catherine A; McGettigan James P; Dietzschold Bernhard; Herrine Steven K; Dubuisson Jean; Pomerantz Roger J; Schnell Matthias J
The Dorrance H. Hamilton Laboratories, Thomas Jefferson University, Philadelphia, Pennsylvania 19107, USA.
Virology (United States) Jan 5 2002, 292 (1) p24-34, ISSN 0042-6822 Journal Code: 0110674
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
A highly attenuated, recombinant rabies virus (RV) vaccine strain-based vector was utilized as a new immunization strategy to induce humoral and cellular responses against hepatitis C (HCV) glycoprotein E2. We showed previously that RV-based vectors are able to induce strong immune responses against human immunodeficiency virus type I (HIV-1) antigens. Here we constructed and characterized three replication-competent RV-based vectors expressing either both HCV envelope proteins E1 and E2 or a modified version of E2 which lacks 85 amino acids of its carboxy terminus and contains the human CD4 transmembrane domain and the CD4 or RV glycoprotein cytoplasmic domain. All three constructs stably expressed the respective protein(s) as indicated by Western blotting and immunostaining. Moreover, surface expression of HCV E2 resulted in efficient incorporation of the HCV envelope protein regardless of the presence of the RV G cytoplasmic domain, which was described previously as a requirement for incorporation of foreign glycoproteins into RV particles. Killed and purified RV virions containing HCV E2 were highly immunogenic in mice and also proved useful as a diagnostic tool, as indicated by a specific reaction with sera from HCV -infected patients. In addition, RV vaccine vehicles were able to induce cellular responses against HCV E2. These

results further suggest that recombinant RVs are potentially useful vaccine vectors against important human viral diseases.

10/AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10172690 99154827 PMID: 10037223
New monoclonal antibodies against a recombinant second envelope protein of Hepatitis C virus.
Inudoh M; Kato N; Tanaka Y
Virology Division, National Cancer Center Research Institute, Tokyo, Japan.
Microbiology and immunology (JAPAN) 1998, 42 (12) p875-7, ISSN 0385-5600 Journal Code: 7703966
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
To study the immunological features of the hepatitis C virus (HCV) envelope protein (E2 protein), new specific monoclonal antibodies (mAbs) were generated. WKA/H rats were immunized with syngeneic cells infected with a vaccinia virus expressing the E2 protein and with soluble E2 protein obtained from Chinese hamster ovary cells with a plasmid-based expression system. By screening hybridoma cells obtained from spleen cells of the immunized rats, three specific mAbs were obtained. One mAb was reactive to a peptide corresponding to the hypervariable region 1 (HVR1) in E2 protein, while the others reacted to regions outside HVR1. The significance of these antibodies for the diagnosis of HCV infection as well as for analysis of the structure of the HCV E2 protein will be discussed.

10/AB/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08388229 95154369 PMID: 7531642
T cell recognition of hepatitis B and C viral antigens.
Jung M C; Diepolder H M; Pape G R
Medical Department II, Klinikum Grosshadern, University of Munich, Germany.
European journal of clinical investigation (ENGLAND) Oct 1994, 24 (10) p641-50, ISSN 0014-2972 Journal Code: 0245331
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM

Record type: Completed

The outcome of hepatitis B and C heavily depends on the appropriate virus specific T cell response. Both CD8+ and CD4+ T lymphocytes do not recognize native viral proteins but processed peptides bound to MHC class I and class II, respectively. For therapeutical intervention aimed at T lymphocytes in chronic carriers as well as for the development of new vaccines , a precise identification of immunodominant epitopes, which can be recognized by a majority of patients, is necessary. Biological features of certain viral antigens have been partly characterized in animal models, but with the availability of modern molecular technology it is possible to extend these findings to the human system. The identification of anchor residues and motifs in peptides, which are essential for binding to certain MHC class I and class II molecules, allows the prediction of MHC allele-specific epitopes within viral proteins. By the use of synthetic peptides and vaccinia expression vectors, several epitopes for cytotoxic and helper T lymphocytes have been identified in HBV and HCV antigens. In HBV infection cytotoxic T lymphocytes recognize epitopes within the polymerase protein, the envelope protein and the nucleocapsid. In HCV cytotoxic epitopes have so far been identified within the nucleocapsid, E1, E2 and NS2. Since virus specific CD8+ T lymphocytes lyse virus infected cells in vitro and seem to play an important role for viral elimination in vivo, activation of virus specific effector cells may be achieved by immunizing chronically infected patients with the MHC-allele-specific peptides. Epitopes for CD4+ T lymphocytes have been demonstrated in the majority of HBV- and HCV -proteins. Different subsets of CD4+ T lymphocytes influence the course of infection by the production of lymphokines which either support antibody production by B cells or cellular antiviral effector mechanisms. In acute and chronic HBV infection the HBcAg/HBeAg-specific T cell response is closely correlated to viral elimination and the occurrence of anti-HBe- and anti-HBs antibodies. In HCV infection the CD4+ T cell response appears to be more heterogenous, and better functional characterization of the CD4+ response to immunodominant peptide epitopes in association with certain disease stages is required. Since T cell activation, the resulting effector functions and binding of the peptide to the HLA-molecule mainly depend on the peptide structure, viral mutations leading to amino acid changes may contribute to T cell non-responsiveness or an inappropriate T cell response.(ABSTRACT TRUNCATED AT 400 WORDS)

10/AB/4 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

10718296 EMBASE No: 2000206504
Hepatitis C virus

LE VIRUS DE L'HEPATITE·C
F. Querenghi, INSERM Unite 271, 151, cours Albert-Thomas, 69424 Lyon Cedex 03
AUTHOR EMAIL: zoulim@lyon151.inserm.fr
Revue du Praticien (REV. PRAT.) (France) 15 MAY 2000, 50/10 (1060-1065)
CODEN: REPRA ISSN: 0035-2640
DOCUMENT TYPE: Journal; Article
LANGUAGE: FRENCH SUMMARY LANGUAGE: ENGLISH; FRENCH
NUMBER OF REFERENCES: 18

Hepatitis C virus (HCV) is a small enveloped virus whose genome is a RNA molecule encoding a polyprotein that is processed by cellular and viral proteases to produce the 3 structural proteins (the core protein C and the 2 envelope proteins E1 and E2) and the 6 nonstructural proteins (NS2, NS3, NS4A, NS4B, NS5A and NS5B). The HCV genome exhibits a significant genetic heterogeneity. HCV isolates can be divided into genetically distinct groups referred to as genotypes, whereas the population of HCV genomes, within an infected individual, is present as a group of heterogeneous but closely related sequences referred to as quasispecies. Studies of the molecular biology of HCV and of new vaccinal or therapeutic strategies are hampered by the lack of easy to use cellular culture systems and of animal models.

10/AB/5 (Item 1 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01489647 SUPPLIER NUMBER: 15831726 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Recognition of uridine diphosphate glucuronosyl transferases by LKM-3 antibodies in chronic hepatitis D. (liver-kidney microsomal antibodies type 3)
Philipp, Thomas; Durazzo, Marilena; Trautwein, Christian; Alex, Britta; Straub, Petra; Lamb, John G.; Johnson, Eric F.; Tukey, Robert H.; Manns, Michael P.
The Lancet, v344, n8922, p578(4)
August 27,
1994
PUBLICATION FORMAT: Magazine/Journal ISSN: 0099-5355 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional
WORD COUNT: 3298 LINE COUNT: 00272

ABSTRACT: Uridine diphosphate glucuronosyl transferase-1 (UGT-1) appears

to be an autoantigen for liver-kidney microsomal antibody type 3 (LKM-3) in chronic hepatitis D (HDV). HDV is a viral infection of the liver that occurs only in the presence of hepatitis B infection. LKM-3 is an autoantibody found in patients with HDV, directed against liver and kidney cells. Researchers tested blood samples from 65 patients with various types of hepatitis, 21 patients with other liver or autoimmune diseases and eight healthy persons. Immunological and molecular analyses pinpointed UGT-1 as the antigen that provokes a response from LKM-3. Test results were confirmed by challenging LKM-3-positive blood samples with different rabbit liver UGT proteins. Blood samples from patients with only hepatitis B did not react with UGT proteins. The autoimmune mechanisms involved in HDV may be studied further with this determination of the LKM-3 autoantigen.

10/AB/6 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI

014368050
WPI Acc No: 2002-188752/200224
XRAM Acc No: C02-058413
Novel polynucleotide having hepatitis B virus small envelope protein (HBsAg-S) coding sequence (HCS) adapted to receive insert coding sequence within HCS, and yet encode HBsAg-S that assembles into virus like particle
Patent Assignee: QUEENSLAND DEPT HEALTH SAKZEWSKI VIRUS (QUEE-N)
Inventor: GOWANS E J; MACNAUGHTON T B; NETTER H J
Number of Countries: 096 Number of Patents: 002
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
WO 200210416 A1 20020207 WO 2001AU935 A 20010730 200224 B
AU 200176182 A 20020213 AU 200176182 A 20010730 200238

Priority Applications (No Type Date): AU 20009120 A 20000731
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200210416 A1 E 56 C12N-015/86
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200176182 A C12N-015/86 Based on patent WO 200210416

Abstract (Basic): WO 200210416 A1

Abstract (Basic):

NOVELTY - An isolated polynucleotide (I) comprising a hepatitis B virus small envelope protein (HBsAg-S) coding (HCS) sequence that is adapted to receive an insert coding sequence (IC1), within a part of HCS encoding an exposed site within the external loop for HBsAg-S and still encode a HBsAg-S which is able to assemble into a virus-like particle (VLP), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) producing (I);

(2) a vector (II) comprising (I);

(3) a host cell (III) comprising (I) or (II);

(4) a protein, polypeptide or peptide (IV) encode by (I);

(5) a VLP (V) comprising (IV);

(6) producing (V) (M1) involves transfecting a cell with a vector encoding HBsAg-S and an insert that upon expression is capable of assembling into the VLP, culturing the cell under conditions that enable the expression of HBsAg-S including the insert and assembly of the VLP and isolating the VLP;

(7) a pharmaceutical composition (VI) comprising (V) and a carrier;

(8) an immunogenic preparation comprising (V) or (VI);

(9) a VLP composition (VII) comprising several (V) each of which comprises a single heterologous insert, or is a hybrid VLP comprising several heterologous inserts; and

(10) producing VLP adapted to deliver an agent to a target cell by carrying out (M1), where the vector encodes HBsAg-S and an insert that encodes an agent and a binding agent specific for the target cell.

ACTIVITY - Virucide; immunostimulant.

MECHANISM OF ACTION - Immune response inducer.

To investigate whether antibodies could be raised simultaneously against the hepatitis C virus (HCV)-HVR1-1a and HVR1-1b epitope, four mice were immunized with an equimolar mix of HBsAg/AgeI-35-1a ((V) which expresses complete HVR1 polypeptide and downstream 5 amino acid derived from HCV-1a isolate) VLPs and HBsAg/AgeI-36-1b VLPs, and the antibody response against the individual peptides tested by enzyme linked immunosorbent assay (ELISA). Serum samples from three of four mice reacted with both epitopes, and the sample from the fourth mouse reacted weakly against the HVR1-1a epitope but not against the HVR1-1b epitope. The serum samples of the three mice (taken at day 56, i.e., 9 days after the last booster injection) which responded strongly against both HVR1-1a and -1b epitopes showed a titer against the HVR1-1a epitope ranging from 1:6400 to 1:12800. The antibody titer against the HVR1-1b epitope ranged from 1:1600 to 1:6400. In both instances, these titers were considerably higher than those generated by immunization

with the individual recombinant particles. These results suggested that a synergistic effect may account for the higher titers resulting from immunization with the mixed recombinant particles.

USE - (V) or (VI) is useful for generating an immune response in a patient, where (V) includes an immunogenic insert. Optionally, the method further involves administering to the patient a HBV immunogenic preparation to the patient. (V), (VI) or (VII) are useful for treating a disease or disorder, and for delivering an agent to a target cell. Delivering an agent to the target cell involves preparing a VLP which presents a binding agent for the target cell, and contacting the VLP with the media containing the target cell (claimed).

pp; 56 DwgNo 0/11

10/AB/7 (Item 2 from file: 351)
DIALOG(R)File 351:Derwent WPI

013859735
WPI Acc No: 2001-343948/200136
XRAM Acc No: C01-106548
Mutant non-structural (NS) Hepatitis C virus (HCV) polypeptide, useful as a vaccine against HCV, comprises a polypeptide having a mutation that functionally disrupts the catalytic domain of NS3
Patent Assignee: CHIRON CORP (CHIR)
Inventor: COIT D; HOUGHTON M; MEDINA-SELBY A; SELBY M
Number of Countries: 094 Number of Patents: 002
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
WO 200138360 A2 20010531 WO 2000US32326 A 20001122 200136 B
AU 200125746 A 20010604 AU 200125746 A 20001122 200153

Priority Applications (No Type Date): US 99167502 P 19991124
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200138360 A2 E 340 C07K-014/005
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200125746 A C07K-014/005 Based on patent WO 200138360

Abstract (Basic): WO 200138360 A2
Abstract (Basic):
NOVELTY - An isolated mutant non-structural (NS) Hepatitis C virus (HCV) polypeptide (P1) comprising a polypeptide having a mutation in the catalytic domain of NS3, where the mutation functionally disrupts the catalytic domain, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) an isolated and purified polynucleotide (N1) which encodes P1;
(2) an expression vector comprising N1;
(3) an expression vector comprising the 19912 nucleotide sequence (I) defined in the specification;
(4) a host cell comprising N1;
(5) a method of preparing a mutant NS HCV polypeptide, comprising:
(a) transforming a host cell with an expression vector of (2), under conditions where the polypeptide is expressed; and
(b) isolating the polypeptide;
(6) an antibody that specifically binds to P1; and
(7) a method of eliciting an immune response in a subject, comprising administering P1 or N1.
ACTIVITY - Antiviral.
No biological data given.
MECHANISM OF ACTION - Vaccine; immunostimulant.
No biological data given.
USE - The HCV polypeptide and polynucleotide (preferably DNA or a plasmid (claimed)) compositions can be used in vaccines against HCV and as diagnostics . The antibodies raised against these polypeptides can also be used as diagnostics , or for passive immunotherapy . The antibodies to these polypeptides are also useful for isolating and identifying HCV particles.
pp; 340 DwgNo 0/23

10/AB/8 (Item 3 from file: 351)
DIALOG(R)File 351:Derwent WPI

013851621
WPI Acc No: 2001-335834/200135
XRAM Acc No: C01-103757
New recombinant fusion proteins with a modified measles virus hemagglutin protein and a human protein, useful for treating hepatitis C virus or human immunodeficiency virus infection, or boosting anti-measles immunity in a patient
Patent Assignee: PETRIK J (PETR-I)
Inventor: PETRIK J

Number of Countries: 095 Number of Patents: 003
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
WO 200132893 A1 20010510 WO 2000GB4191 A 20001101 200135 B
AU 200111560 A 20010514 AU 200111560 A 20001101 200149
EP 1226256 A1 20020731 EP 2000973003 A 20001101 200257
WO 2000GB4191 A 20001101

Priority Applications (No Type Date): GB 9925966 A 19991102
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200132893 A1 E 27 C12N-015/62
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200111560 A C12N-015/62 Based on patent WO 200132893
EP 1226256 A1 E C12N-015/62 Based on patent WO 200132893
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): WO 200132893 A1
Abstract (Basic):
NOVELTY - A new recombinant bifunctional fusion protein comprises a first component that is a measles virus protein and a second component fused to the first component and which is capable of binding to genetically variable viruses or other therapeutic targets.
DETAILED DESCRIPTION - A new recombinant bifunctional fusion protein comprises a first component that is a measles virus protein modified so that it does not bind to CD46 receptor or cause hemadsorption or hemagglutination, but retains its antigenecity and is recognized by anti-measles antibodies, and a second component fused to the first component and which is capable of binding to genetically variable viruses or other therapeutic targets.
INDEPENDENT CLAIMS are also included for the following:
(1) a polynucleotide coding for the fusion protein; and
(2) pharmaceutical compositions comprising the protein or the polynucleotide, with a pharmaceutical carrier.
ACTIVITY - Virucide; hepatotropic; antiinflammtory; anti-HIV. No clinical details given.
MECHANISM OF ACTION - Vaccine.
USE - The recombinant fusion are useful as therapeutic vaccines

to treat HCV or HIV infection. These bifunctional proteins are useful for boosting the existing anti-measles immunity in a patient and at the same time retargeting it against a new target, e.g. HIV or HCV. The polynucleotide (particularly DNA) is useful as a DNA vaccine for therapeutic antiviral purposes.
pp; 27 DwgNo 0/2

10/AB/9 (Item 4 from file: 351)
DIALOG(R)File 351:Derwent WPI

013781865
WPI Acc No: 2001-266076/200127
XRAM Acc No: C01-080576
Novel nucleic acid molecules that encode hepatitis C virus envelope 2 protein lacking all or part of hypervariable region 1 of envelope protein , useful as vaccine components for treating or preventing HCV infections
Patent Assignee: US DEPT OF HEALTH (USSH); US DEPT HEALTH & HUMAN SERVICES (USSH)
Inventor: BUKH J; EMERSON S U; FORNS X; PURCELL R H
Number of Countries: 094 Number of Patents: 002
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
WO 200121807 A1 20010329 WO 2000US25987 A 20000922 200127 B
AU 200076028 A 20010424 AU 200076028 A 20000922 200141

Priority Applications (No Type Date): US 99155823 P 19990923
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200121807 A1 E 80 C12N-015/40
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
AU 200076028 A C12N-015/40 Based on patent WO 200121807

Abstract (Basic): WO 200121807 A1
Abstract (Basic):
NOVELTY - A nucleic acid molecule (I) encoding human hepatitis C virus (HCV) lacking hypervariable region (HVR)1 of HCV envelope 2 (HE2)

protein, or nucleic acid molecule (II) comprising chimeric virus (pestivirus or flavivirus) genome whose structural region has been replaced by structural region of HCV genome lacking HVR1 of HE2 region, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) DNA constructs (III) and (IV) comprising (I) or (II), respectively;

(2) RNA transcripts (V) and (VI) comprising (III) and (IV), respectively;

(3) host cells (VII)-(X) transformed or transfected with (III)-(VI), respectively;

(4) HCV E2 protein produced by the above mentioned host cells;

(5) HCV produced by (VII) or (IX);

(6) a chimeric virus produced by (VIII) or (X);

(7) a HCV genome (XI) comprising (I);

(8) a chimeric virus genome (XII) comprising (II);

(9) host cells infected with (XI) or (XII), respectively;

(10) a E2 polypeptide (XIII) encoded by (I) or (II);

(11) antibody against (XI)-(XIII);

(12) compositions comprising (I), (II), (XI)-(XIII) suspended in a diluent or excipient;

(13) immunizing (M1) a mammal, involves administering the mammal with above mentioned compositions;

(14) antibodies produced by (M1);

(15) T cells reactive with (XI) or (XII);

(16) a chimeric gene (XIV) comprising in 5' and 3' order an endoplasmic reticulum signal sequence, and a coding sequence which encodes HCV E2 protein lacking HVR1 of the full-length HE2 protein and at least the 30 carboxy-terminal amino acids of the full-length E2 protein;

(17) an expression vector (XV) comprising (XIV);

(18) a host cell transformed or transfected with (XV);

(19) E2 protein (XVI) produced by a method for expressing secreted HE2 protein lacking HVR, which involves transforming a host cell with (XV) by which secreted HE2 protein is expressed;

(20) immunizing (M2) a mammal by administering (XV) or (XVI) which stimulates the production of protective antibodies to HCV;

(21) antibodies (XVII) produced by (M2); and

(22) a pharmaceutical composition comprising (XV)-(XVII).

ACTIVITY - Antiviral. No supporting data is given.

MECHANISM OF ACTION - Vaccine ; gene therapy .

USE - (XV) is useful for expressing a secreted HCV E2 protein lacking HVR, which involves transforming a host cell with (XV) under conditions which permit the expression of the E2 protein on the cell surface. The expression vector comprising (XIV) with a plasma

membrane anchor sequence, is useful for expressing a HCV E2 protein in the surface of a cell which involves performing a process as described above. (I) or (II) is useful for producing infectious HCV and chimeric HCV viruses (claimed). The infectious HCV and chimeric HCV produced by the above method is useful for identifying cell lines capable of supporting the replication of the virus. (I) or (II) is useful for treating or preventing HCV in a mammal by immunization. The host cells expressing (I), (II) are also useful as immunogens to stimulate a protective immune response to HCV. (XIV) is also useful as a immunogen to produce protective antibodies to HCV. (XIV) is also useful for therapeutic purposes. The nucleic acids, polypeptides and viruses as described above are useful in the production of antibodies against HCV. The antibodies produced are used in passive immunoprophylaxis for treatment of diseases caused by HCV in animals, especially humans.

ADVANTAGE - (I) or (II) is able to replicate in vivo and stimulate a strong cellular immune response.

pp; 80 DwgNo 0/4

10/AB/10 (Item 5 from file: 351)
DIALOG(R)File 351:Derwent WPI

012840957
WPI Acc No: 2000-012789/200001
XRAM Acc No: C00-002329
Preparing hepatitis C virus envelope glycoproteins for use as vaccines
Patent Assignee: MOGAM BIOTECHNOLOGY RES INST (MOGA-N)
Inventor: KIM J; MIN M; MOON H; PARK J; YUN Y
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5985609	A	19991116	US 94334545	A	19941104	200001 B

Priority Applications (No Type Date): US 94334545 A 19941104
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5985609	A		23	C12N-015/51	

Abstract (Basic): US 5985609 A
Abstract (Basic):

NOVELTY - A process (I) for preparing hepatitis C virus (HCV) envelope glycoproteins using Chinese Hamster Ovary (CHO) cells transformed with recombinant expression vectors containing the HCV genome, is new.

DETAILED DESCRIPTION - A process (I) for preparing hepatitis C

virus (HCV) E1 and/or E2/NS1 envelope glycoproteins, comprises culturing Chinese Hamster Ovary (CHO) cells transformed with an expression vector which encodes either HCV E1 or full length HCV E2/NS1 (respectively) envelope glycoproteins. The E1 and/or E2/NS1 envelope glycoproteins are not expressed as part of a polyprotein. For the production of E1, the cultured cells are cell line KCLRF-BP-00003 and the expression vector is vector E113. For the production of E2/NS1, the cultured cells are cell line KCLRF-BP-00004 and the expression vector is E219.

USE - (I) may be used to produce HCV envelope glycoproteins (E1 and/or E2/NS1) for use as vaccines to immunize against hepatitis. The antibodies produced from these antigens may also be used as a diagnostic reagent for detecting the presence of HCV viral particles in samples.

ADVANTAGE - (I) may be used to produce antigens in large quantities for use as vaccines. This avoids the need to isolate viruses from infected patients (or cell cultures expressing viral particles) for attenuation which is a very laborious process with low yields.

pp; 23 DwgNo 0/6

10/AB/11 (Item 6 from file: 351)
DIALOG(R)File 351:Derwent WPI

012050660
WPI Acc No: 1998-467570/199840
XRAM Acc No: C98-141841

Host cells transformed with an expression cassette - comprising DNA encoding a protein for catalysing disulphide bond formation, useful producing biologically active proteins

Patent Assignee: CHIRON SPA (CHIR-N)
Inventor: GALEOTTI C
Number of Countries: 020 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9837208	A1	19980827	WO 98IB269	A	19980218	199840 B
EP 1007698	A1	20000614	EP 98904318	A	19980218	200033
			WO 98IB269	A	19980218	
JP 2001514490	W	20010911	JP 98536436	A	19980218	200167
			WO 98IB269	A	19980218	
US 6361969	B1	20020326	WO 98IB269	A	19980218	200226
			US 99367609	A	19990816	

Priority Applications (No Type Date): GB 973406 A 19970219
Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
WO 9837208 A1 E 63 C12N-015/63
Designated States (National): JP US
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
EP 1007698 A1 E C12N-015/63 Based on patent WO 9837208
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 2001514490 W 56 C12N-015/09 Based on patent WO 9837208
US 6361969 B1 C12P-021/02 Based on patent WO 9837208

Abstract (Basic): WO 9837208 A

A vector comprises an expression cassette comprising a DNA sequence encoding a protein capable of catalysing disulphide bond formation. Also claimed is a host organism transformed with the vector.

USE - The vectors can be used for the production in non-native expression hosts of heterologous proteins in a properly-folded, biologically active form due to disulphide bond formation. They can be used for the production of proteins for therapeutic or diagnostic uses. In particular they can be used for the production of immunogenic compositions such as hepatitis C virus (HCV) E2715 envelope glycoprotein or human c-fos-induced growth factor (FIGF).

Dwg.0/5

10/AB/12 (Item 7 from file: 351)
DIALOG(R)File 351:Derwent WPI

011492950
WPI Acc No: 1997-470863/199743
XRAM Acc No: C97-149691
Transgenic mammal whose hepatic cells express Hepatitis C virus proteins C, E1 or E2 - useful as model to assess immunobiology and pathogenesis of hepatocellular injury
Patent Assignee: GEN HOSPITAL CORP (GEHO)
Inventor: KAWAMURA T; LIANG T J; SCHMIDT E V
Number of Countries: 002 Number of Patents: 002
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
WO 9733979 A1 19970918 WO 97US3939 A 19970313 199743 B
JP 2001508283 W 20010626 JP 97532822 A 19970313 200140
WO 97US3939 A 19970313

Priority Applications (No Type Date): US 96696271 A 19960813; US 9613337 A 19960313

Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 9733979 A1 E 30 C12N-005/00
Designated States (National): JP US
JP 2001508283 W 27 A01K-067/027 Based on patent WO 9733979

Abstract (Basic): WO 9733979 A

A transgenic mammal (especially a mouse) whose hepatic cells express one or more of the Hepatitis C virus (HCV) proteins C, E1 or E2 is new.

USE - HCV infection has been linked with the development of primary hepatocellular carcinoma (PHC) in Japan, Africa and Europe and may have a causative role in other liver diseases. The genomic organisation of HCV predicts three structural proteins i.e. core capsid protein C and envelope proteins E1 and E2 which may mediate the damage caused by HCV infection either directly or indirectly by the action of cytotoxic T cells. The transgenic animals can be used to assess the immunobiology and pathogenesis of hepatocellular injury associated with HCV infection. It is also possible to study whether expression of viral proteins leads to hepatocellular injury independently of the host immune response. The transgenic animals are also useful for testing therapeutic compounds and genetic treatment strategies.

Dwg.0/9

10/AB/13 (Item 8 from file: 351)
DIALOG(R)File 351:Derwent WPI

011130729
WPI Acc No: 1997-108653/199710
XRAM Acc No: C97-034615
XRPX Acc No: N97-089939
New expression system for proteins, partic. HCV antigens - for use in assays for screening and prognostic applications and for use in vaccines
Patent Assignee: ABBOTT LAB (ABBO)
Inventor: LESNIEWSKI R R; OKASINSKI G F; SCHAEFER V G; SUHAR T S
Number of Countries: 021 Number of Patents: 004
Patent Family:
Patent No Kind Date Applicat No Kind Date Week
WO 9641179 A1 19961219 WO 96US9345 A 19960605 199710 B
EP 830602 A1 19980325 EP 96918273 A 19960605 199816
WO 96US9345 A 19960605
JP 11508035 W 19990713 WO 96US9345 A 19960605 199938
JP 97501685 A 19960605

US 6020122 A 20000201 US 95478073 A 19950607 200013

Priority Applications (No Type Date): US 95478073 A 19950607
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 9641179 A1 E 40 G01N-033/543
Designated States (National): CA JP
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
EP 830602 A1 E G01N-033/543 Based on patent WO 9641179
Designated States (Regional): AT BE CH DE ES FR GB IT LI NL
JP 11508035 W 44 G01N-033/543 Based on patent WO 9641179
US 6020122 A C12Q-001/70

Abstract (Basic): WO 9641179 A

An assay for detecting anti-analyte antibody (AAA) in a test sample comprises: (a) at least one protein specific for the analyte attached to a solid phase is contacted with a test sample such that protein/antibody complexes occur; and (b) an indicator reagent comprising a signal generating cpd. and a specific binding member for the analyte is contacted with the complexes for a reaction to occur, whereby the signal generated is an indication of the presence of the AAA in the test sample, where the improvement comprises attaching a fusion protein produced in plasmid 577 to the solid phase as the capture reagent. Also claimed are: (1) a competitive assay for detecting the presence of an AAA immunologically reactive with a protein in a fluid test sample in which: (a) first and second aliquots of the test sample are obtained; (b) the first aliquot of the sample is contacted with a protein specific for the AAA attached to a solid support; and (c) the second aliquot is contacted with unattached protein specific for the AAA and then contacted with the bound protein, where the improvement comprises a CKS-fusion protein, specific for the AAA attached to the solid phase of step (b) and the unattached fusion protein, produced in plasmid 577 specific for the AAA of step (c); (2) a diagnostic reagent comprising a fusion protein produced in plasmid 577; (E) plasmid 577; and (3) a vaccine for treatment of an infection comprising an immunogenic polypeptide or fragment in an excipient, where the improvement comprises a polypeptide produced in plasmid 577.

USE - The plasmid 577 is used partic. for producing glycosylated hepatitis C virus (HCV) fusion proteins. These glycosylated proteins can be used for eg. assay systems for screening and prognostic applications and as vaccine prepns. These HCV viral envelope proteins expressed in mammalian cells also allow for inhibitor studies including elucidation of specific viral attachment sites or sequences and/or viral receptors on susceptible cell types, eg. liver cells. Antibodies can also be produced from the proteins derived from these

mammalian expression systems which then in turn may be used for diagnostic , prognostic and therapeutic applications.

ADVANTAGE - The plasmid is used in a mammalian expression system that can produce high levels of protein which could not be expressed due to the non-secretory nature of the gene. The system is esp. used for expressing HCV proteins, allowing proper processing, glycosylation and conformation of the viral protein.

Dwg.0/3

10/AB/14 (Item 1 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0272865 DBA Accession No.: 2001-12089
Induction of hepatitis C virus-specific cytotoxic T-lymphocytes in mice by an inoculation with an expression plasmid - plasmid pEFCE1E2-mediated envelope protein and expression in mouse for nucleic acid vaccine and gene therapy
AUTHOR: Kamei A; Tamaki S; Taniyama H; Takamura S; Nishimura Y; Kagawa Y; Uno-Furuta S; Kaito M; Kim G; Toda M; Matsuura Y; Miyamura T; Adachi Y; +Yasutomi Y
CORPORATE AFFILIATE: Univ.Mie Univ.Rakunogakuen Nat.Inst.Infec.Dis.Tokyo
CORPORATE SOURCE: Department of Bioregulation, Mie University School of Medicine, 2-174 Edobashi, Tsu, Mie 514-8507, Japan.
email:yasutomi@doc.medic.mie-u.ac.jp.
JOURNAL: Virology (273, 1, 120-26) 2001
ISSN: 0042-6822 CODEN: VIRLAX
LANGUAGE: English
ABSTRACT: Intrahepatic inoculation in a mice model of hepatitis C virus (HCV) with a plasmid encoding HCV proteins was studied. Plasmid pEFCE1E2 was constructed and inoculated into 6-8 wk old BALB/c mice and an electric pulse was applied immediately after. After 6 days HCV-core protein and E1 and E2 envelope proteins were detected. HCV -specific cytotoxic T-lymphocyte (CTL) responses were examined using target cells either pulsed with a specific protein or infected with a recombinant vaccinia virus expressing HCV protein. Mice were shown to develop CD8+, major histocompatibility complex class-I-restricted CTL responses. The above results show that direct intrahepatic inoculation could be used as a nucleic acid vaccine for HCV infection in humans. (27 ref)

10/AB/15 (Item 2 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0271356 DBA Accession No.: 2001-10580 PATENT
Novel hepatitis C virus protein useful in the manufacture of vaccine composition, for raising antibodies and for detecting HCV proteins, comprise at least two cysteine amino acids that have reversible redox status - expression and purification in Vero cell culture
AUTHOR: Bosman A; Depla E; Maertens G
CORPORATE SOURCE: Ghent, Belgium.
PATENT ASSIGNEE: Innogenetics 2001
PATENT NUMBER: WO 200130815 PATENT DATE: 20010503 WPI ACCESSION NO.:
2001-316323 (2033)
PRIORITY APPLIC. NO.: US 169288 APPLIC. DATE: 19991207
NATIONAL APPLIC. NO.: WO 2000EP10499 APPLIC. DATE: 20001025
LANGUAGE: English
ABSTRACT: A hepatitis C virus (HCV) protein (I) containing at least 2 cysteine amino acids that have a reversible redox status is claimed. Also claimed is a bioassay for identifying compounds that modulate the oxido-reductase activity of (I). (I) is administered through oral, i.m. or i.v. route. In an example, HVC virus envelope protein (192-326 amino acid protein sequence) was expressed and purified in Vero cells using vaccinia virus pv-HCV11A. The above can be used for raising antibodies that specifically recognize (I) and is also useful for treating and preventing disorders and diseases related to HCV infections. (I) can be used for drug screening and various diagnostic and therapeutic applications. (65pp)

10/AB/16 (Item 3 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0268579 DBA Accession No.: 2001-08885 PATENT
Novel nucleic acid molecules that encode hepatitis C virus envelope 2 protein lacking all or part of hypervariable region-1 of envelope protein , useful as vaccine components for treating or preventing HCV infections - vector-mediated gene transfer and expression in host cell
AUTHOR: Forns X; Bukh J; Emerson S; Purcell R H
CORPORATE SOURCE: Rockville, MD, USA.
PATENT ASSIGNEE: U.S.Dep.Health-Hum.Serv. 2001
PATENT NUMBER: WO 200121807 PATENT DATE: 20010329 WPI ACCESSION NO.:
2001-266076 (2027)
PRIORITY APPLIC. NO.: US 155823 APPLIC. DATE: 19990923
NATIONAL APPLIC. NO.: WO 2000US25987 APPLIC. DATE: 20000922

LANGUAGE: English
ABSTRACT: A nucleic acid (I) encoding human hepatitis C virus (HCV) lacking the hypervariable region (HVR)1 of HCV envelope-2 (HE2) protein, or nucleic acid (II) is claimed. Also claimed are: DNA or RNA construct containing (I) or (II); host cells transformed with the RNA or DNA construct; HVC-E2 proteins, HCV genome (III) and chimeric virus (IV) produced by the host cells; host cell infected with the chimeric or HCV genome; an E2 protein encoded by (I) or (II); an antibody against (III) or (IV); composition with (I), (II), (III) or (IV); immunizing a mammal with the composition; T-lymphocyte reactive with (III) or (IV); a chimeric gene; and a kit for treating or preventing HCV. In an example, deletion of the sequence encoding HVR was carried out using polymerase chain reaction. A clone containing the correct sequence was selected, retransformed and large-scale plasmid DNA was prepared. The complete sequence of HVR1 deletion mutant (H77C-delta-HVR1) was identical to plasmid pCV-H77 but lacking the fragment from positions 1,491 to 1,571 which encodes HVR1. The above is useful in secreting HCV-E2 protein lacking HVR for vaccine compositions. (80pp)

10/AB/17 (Item 4 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0256116 DBA Accession No.: 2000-10606
Evaluation of hepatitis C virus glycoprotein E2 for vaccine design: an endoplasmic reticulum-retained recombinant protein is superior to secreted recombinant protein and DNA-based vaccine candidates - recombinant vaccine
AUTHOR: Heile J M; Fong Y L; Rosa D; Berger K; Saletti G; Campagnoli S ; Bensi G; Capo S; Coates S; Crawford K; Dong C; Wininger M; Baker G; Cousens L; Chien D; Ng P; Archangel P; Grandi G; Houghton M; Abrignani S
CORPORATE AFFILIATE: Chiron
CORPORATE SOURCE: IRIS Research Center, Chiron, Via Fiorentina 1, Siena 53100, Italy. email:sergio abrignani@biocine.it
JOURNAL: J.Virol. (74, 15, 6885-92) 2000
ISSN: 0022-538X CODEN: JOVIAM
LANGUAGE: English
ABSTRACT: The hepatitis C virus (HCV) genome encodes a number of structural and nonstructural antigens which can be used in a subunit recombinant vaccine . The HCV envelope glycoprotein E2 has recently been shown to bind to CD81 on human cells and is a prime candidate for inclusion in any recombinant vaccine . The optimal form of HCV E2 antigen was assessed from the perspective of antibody (Ab) generation. The quality of recombinant E2 protein was evaluated by both

the capacity to bind its putative receptor CD81 on human cells and the ability to elicit Abs that inhibited this binding (NOB Abs). Truncated E2 proteins expressed in CHO cells bound with high efficiency to human cells and elicited NOB Abs in guinea-pigs only when purified from the core-glycosylated intracellular fraction, while the complex-glycosylate d secreted fraction did not bind and elicited no NOB Abs. Carbohydrate moieties were not required for E2 binding to human cells and only the monomeric nonaggregated fraction could bind to CD81. In mice the recombinant vaccines were compared with nucleic acid vaccines (plasmid pAC-FN) and found to be superior in quantity and quality of response. (52 ref)

10/AB/18 (Item 5 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0249872 DBA Accession No.: 2000-04362 PATENT
Truncated virus glycoprotein expressed at the cell surface, useful for generating antibodies to detect and neutralize hepatitis C virus infections - vector plasmid-mediated truncated flavi virus envelope protein gene transfer and expression in host cell for infection diagnosis , gene therapy and nucleic acid vaccine
AUTHOR: Forns X; Emerson S U; Bukh J; Purcell R H
CORPORATE SOURCE: Rockville, MD, USA.
PATENT ASSIGNEE: U.S.Dep.Health-Hum.Serv. 1999
PATENT NUMBER: WO 9966033 PATENT DATE: 19991223 WPI ACCESSION NO.:
2000-106097 (2009)
PRIORITY APPLIC. NO.: US 89779 APPLIC. DATE: 19980618
NATIONAL APPLIC. NO.: WO 99US12665 APPLIC. DATE: 19990604
LANGUAGE: English
ABSTRACT: A chimeric gene (I) which consists of an endoplasmic reticulum signal peptide and a coding sequence which encodes a truncated hepatitis C virus (HCV) envelope protein fused at its C-terminal to a plasma membrane anchor sequence, is new. Also claimed are: an expression vector (e.g. plasmids pE2, pE2surf and pDisplay) containing (I); a host cell transformed or transfected with the vector; a method for expressing a truncated HCV envelope protein on the surface of a cell, which involves transforming the cell with the above expression vector, under conditions which permit gene expression ; an assay for detecting antibodies to HCV in a biological sample which involves contacting the sample with the transformed host cells in order to form a complex between antibodies and the envelope proteins ; a method for identifying monoclonal antibodies which are specific for HCV envelope proteins ; a method for identifying antibodies which

exhibit neutralizing activity to HCV ; a method for immunizing a mammal by administering an effective amount of the vector; and a nucleic acid vaccine consisting of the vector. The above may be useful for HCV infection diagnosis and gene therapy . (50pp)

10/AB/19 (Item 6 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0247140 DBA Accession No.: 2000-01630 PATENT
Preparing hepatitis C virus envelope glycoproteins for use as vaccines - recombinant flavi virus E1 and E2/NS1 envelope glycoprotein production via vector-mediated gene transfer and expression in CHO cell culture for use in recombinant vaccine
AUTHOR: Min M K; Park J S; Kim J S; Yun Y D; Moon H M
CORPORATE SOURCE: Kyonggi-Do, Republic of Korea.
PATENT ASSIGNEE: Mogam-Biotechnol.Res.Inst. 1999
PATENT NUMBER: US 5985609 PATENT DATE: 19991116 WPI ACCESSION NO.: 2000-012789 (2001)
PRIORITY APPLIC. NO.: US 334545 APPLIC. DATE: 19941104
NATIONAL APPLIC. NO.: US 334545 APPLIC. DATE: 19941104
LANGUAGE: English
ABSTRACT: A new process (I) for preparing hepatitis C virus (HCV) E1 and/or E2/NS1 envelope glycoproteins which utilizes CHO cells transformed with recombinant expression vectors containing the HCV genome, is claimed. The initial CHO cell line used for E1 production were KCLRF-BP-00003 cells transformed with vector E113 and the initial cell line for E2/NS1 production were KCLRF-BP-00004 cells transformed with vector E219. (I) may be useful for producing the HCV envelope proteins which may inturn be used in vaccines for immunizing patients against hepatitis. The antibodies produced from these antigens may also be used as in diagnostic reagents for detecting the presence of HCV virus particles in samples. The transformed CHO cells were cultured in T-25 flasks and then the production of glycoproteins by the different cells was characterized. (23pp)

10/AB/20 (Item 7 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0229193 DBA Accession No.: 98-10790 PATENT
Composition for immunotherapy of hepatitis C virus infection - containing hepatitis C virus capsid and envelop chimeric protein, and DNA encoding

it
AUTHOR: Barban V
CORPORATE SOURCE: Lyon, France.
PATENT ASSIGNEE: Pasteur-Merieux-Sera+Vaccines 1998
PATENT NUMBER: WO 9839030 PATENT DATE: 980911 WPI ACCESSION NO.: 98-495550 (9842)
PRIORITY APPLIC. NO.: FR 972887 APPLIC. DATE: 970306
NATIONAL APPLIC. NO.: WO 98FR448 APPLIC. DATE: 980306
LANGUAGE: French
ABSTRACT: A composition, used for treatment and prevention of hepatitis C virus (HCV) infection is claimed. It consists of a protein (I) containing (ia) all or part of an HCV capsid protein (C), and (ib) all or part of an HCV envelope protein (E). (I) and cleaved fragments of (I) are unable to regulate genes. The composition also contains an equimolar mixture of (C) and (E), and DNA encoding (I), under the control of regulatory elements that promote expression of (I) in mammalian cells. This composition may also be used to treat and prevent diseases such as liver cirrhosis, and development of carcinoma from such infections. The use of both (C) and (E) in a single protein prevents movement of the capsid protein into the mammalian cell nucleus, where it could activate genes, including oncogenes. The preferred (I) is not cleaved by mammalian protease, and (ia) contains the (C) activity regulating segment, and (ib) contains the (E) cytoplasm anchoring segment. Alternatively (I) is cleaved by mammalian protease, and both (ia) and (ib) contain those parts of (C) and (E) that are involved in the mutual interaction between each other. (31pp)

10/AB/21 (Item 8 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0207358 DBA Accession No.: 97-02479
Antigenicity of hepatitis C virus envelope proteins expressed in Chinese hamster ovary cells - complex glycosylation in CHO culture, for use as a diagnostic agent
AUTHOR: Inudoh M; Nyunoya H; Tanaka T; Hjikata M; Kato N; +Shimotohno K
CORPORATE AFFILIATE: Nat.Cancer-Cent.Res.Inst.Tokyo
CORPORATE SOURCE: Virology Division, National Cancer Center Research Institute, 5-1-1 Tsukiji, Chuo-ku, Tokyo 104, Japan.
JOURNAL: Vaccine (14, 17-18, 1590-96) 1996
ISSN: 0264-410X CODEN: VACCDE
LANGUAGE: English
ABSTRACT: A putative 2nd envelope glycoprotein (E2) of hepatitis C virus (HCV) was produced constitutively in a CHO cell culture stably

transformed with a plasmid pE2-724 or plasmid pE2-681 vector expressing E2 protein under the control of an exogenous promoter and an amyloid precursor protein-A4 signal peptide sequence. E2 protein lacking part of the C-terminal hydrophobic region was glycosylated with high-mannose-type oligosaccharides and retained in cells. However, E2 protein lacking the entire C-terminal hydrophobic region was glycosylated with complex-type oligosaccharides and secreted into the medium. Immunoreactivity tests of high-mannose and complex forms of E2 proteins against sera from HCV -infected patients showed that antigenicity of the complex form of E2 protein was greater than that of the high-mannose form, indicating that the complex form was a superior diagnostic agent for HCV . (44 ref)

10/AB/22 (Item 9 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0206255 DBA Accession No.: 97-01376 PATENT
Compositions for diagnosis and treatment of hepatitis C virus - recombinant unprocessed core antigen and truncated envelope protein fusion protein and nonstructural protein, for use as a recombinant vaccine or immunostimulant
AUTHOR: Liao J C; Wang C
CORPORATE SOURCE: San Francisco, CA, USA.
PATENT ASSIGNEE: Bionova 1996
PATENT NUMBER: WO 9637606 PATENT DATE: 961128 WPI ACCESSION NO.: 97-021217 (9702)
PRIORITY APPLIC. NO.: US 447276 APPLIC. DATE: 950522
NATIONAL APPLIC. NO.: WO 96US7378 APPLIC. DATE: 960522
LANGUAGE: English
ABSTRACT: A new hepatitis C virus (HCV) composition contains a fusion protein of an HCV core antigen protein joined to an HCV envelope protein N-terminal portion in unprocessed form, and an isolated HCV nonstructural protein (e.g. NS5 or NS3-NS4), produced by a prokaryote or non-processing eukaryote host cell. Multiple HCV polypeptides may be produced by: introducing into a 1st host a 1st expression vector expressing the HCV fusion protein gene; isolating the fusion protein; introducing into a 2nd host a 2nd vector expressing the HCV nonstructural protein; and combining the 2 recombinant proteins. Alternatively, the 2 proteins may be expressed in the same host. The proteins may be used in an immunoassay for diagnosis of HCV infection in e.g. human samples, or as a recombinant vaccine or immunotherapeutic agent. The unprocessed core protein region initially translated from the HCV genome contains epitope configurations lost on processing at the cleavage site between the gene

encoding the core protein and the adjacent envelope region. The unprocessed configuration provides an improved ability to detect the presence of HCV or anti- HCV antibodies. (74pp)

10/AB/23 (Item 10 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0177043 DBA Accession No.: 95-03864 PATENT
Nucleotide and deduced amino acid sequences of cDNAs - hepatitis C virus envelope-I gene cloning in a baculo virus vector, and expression in an insect cell culture for recombinant vaccine production; DNA primer use in diagnosis
AUTHOR: Bukh J; Miller R H; Purcell R H
PATENT ASSIGNEE: U.S.Dep.Health-Hum.Serv. 1995
PATENT NUMBER: WO 9501442 PATENT DATE: 950112 WPI ACCESSION NO.: 95-061006 (9508)
PRIORITY APPLIC. NO.: US 86428 APPLIC. DATE: 930629
NATIONAL APPLIC. NO.: WO 94US7320 APPLIC. DATE: 940628
LANGUAGE: English
ABSTRACT: 51 cDNAs (I) of the hepatitis C virus (HCV) envelope-I gene and the proteins encoded by these cDNAs are claimed. The corresponding DNA sequences (and deduced protein sequences) are specified. Also claimed are: a recombinant protein (II) having an amino acid sequence selected from the 51 specified protein sequences; a method for the recombinant DNA-directed synthesis of at least 1 complete envelope protein (EP) of HCV comprising culturing a transformed or transfected host organism containing a DNA capable of directing the host organism to produce an EP under suitable culture conditions; a recombinant expression vector (A) (preferably a baculo virus vector) comprising DNA selected from the 51 cDNAs; a host organism (preferably an insect cell) transformed or transfected with (A); a HCV comprising at least one (II); a composition comprising at least one (II) and a suitable excipient, diluent or carrier; a vaccine for immunizing a mammal against HCV infection; and a method for detecting the presence of HCV in a reverse transcription-polymerase chain reaction process using claimed DNA primers of specified DNA sequences. (186pp)

10/AB/24 (Item 11 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0173334 DBA Accession No.: 95-00155 PATENT
A method for the production of hepatitis C virus envelope protein - by gene

expression in Bacillus brevis for the production of a potential recombinant vaccine
PATENT ASSIGNEE: Higeta-Shoyu 1994
PATENT NUMBER: JP 6253883 PATENT DATE: 940913 WPI ACCESSION NO.: 94-329025 (9441)
PRIORITY APPLIC. NO.: JP 9362482 APPLIC. DATE: 930301
NATIONAL APPLIC. NO.: JP 9362482 APPLIC. DATE: 930301
LANGUAGE: JA
ABSTRACT: The production of hepatitis V virus envelope protein (HCV-Env) is claimed, and involves the cultivation of a Bacillus sp. (which contains a nucleotide sequence encoding HCV-Env) to produce and accumulate HCV-Env and collecting the produced protein from the bacterium culture. Also claimed is the production of a fusion protein consisting of the HCV-Env connected directly, or through a spacer, to a peptide of a specified sequence. More specifically, the preferred Bacillus sp. is Bacillus brevis. The nucleotide sequence and protein sequence encoding HCV-Env are specified. This method may be used for the efficient production of HCV-Env. HCV-Env is used in the diagnosis of HCV infection as well as in the development of agents for the treatment of HCV infection. (12pp)

10/AB/25 (Item 12 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0136621 DBA Accession No.: 92-09113
Characterization of the hepatitis C virus E2/NS1 gene product expressed in mammalian cells - cloning and expression in CHO cell culture for potential application as a recombinant vaccine
AUTHOR: Spaete R R; Alexander D; Rugroden M E; Choo Q L; Berger K; Crawford K
CORPORATE AFFILIATE: Chiron
CORPORATE SOURCE: Chiron Corporation, Emeryville, California 94608-2916, USA.
JOURNAL: Virology (188, 2, 819-30) 1992
CODEN: VIRLAX
LANGUAGE: English
ABSTRACT: Genes encoding truncated and full-length versions of the hepatitis C virus protein domain encoding a presumptive envelope glycoprotein , E2/NS1, were cloned and stably expressed in CHO cell cultures, using plasmid pMCMV-HC5p (encoding a full-length form), plasmid pCMV-NS1/ptpaNS1 (encoding a C-terminally and N-terminally truncated form) and plasmid pMCMV-E2-1 (encoding a C-terminally truncated form including the proposed N-terminus of E2/NS1, which exhibits considerable variability among HCV isolates) as vectors. A

high-mannose form resident in the endoplasmic reticulum was the most abundant form detected intracellularly. The full-length form of E2/NS1 appeared to be cell-associated, and could not be detected as a secreted product. C-terminal truncated molecules could be detected in the extracellular media as fully processed glycoproteins containing terminal sialic acid additions. These truncated glycoproteins are predicted to be biologically relevant targets of the host immune response, and are therefore potential subunit vaccine candidates. (69 ref)

10/AB/26 (Item 13 from file: 357)
DIALOG(R)File 357:Derwent Biotech Res.

0119136 DBA Accession No.: 91-06778
Live attenuated pseudorabies virus expressing envelope glycoprotein E1 of hog cholera virus protects swine against both pseudorabies and hog cholera - vaccine vector development
AUTHOR: van Zijl M; Wensvoort G; de Kluyver E; Hulst M; van der Gulden H; +Moormann R
CORPORATE SOURCE: Department of Virology, Central Veterinary Institute, Houtribweg 39, 8221 RA Lelystad, The Netherlands.
JOURNAL: J.Virol. (65, 5, 2761-65) 1991
CODEN: JOVIAM
LANGUAGE: English
ABSTRACT: A live attenuated pseudorabies virus (PRV) vaccine (strain 783) was constructed by deleting parts of the genome of the virulent PRV strain NIA-3. PRV clones plasmid pHBDelta2,4 and plasmid pMZ64, each containing 1 deletion, were used to construct attenuated PRV recombinants expressing hog cholera virus (HCV) envelope glycoprotein E1. Plasmid pHBDelta2.4 contained the unique short region of PRV from which the gI gene and part of the 11K gene had been deleted. The major part of the coding region of the nonessential glycoprotein gX was replaced by HCV fragments encoding E1. Translation stop codons were also introduced. Recombinant viruses carrying the E1 gene were generated by in vivo overlap recombination. Inserts of E1-containing plasmids were cotransfected into PK-15 cells with 4 overlapping cloned subgenomic PRV fragments, giving attenuated recombinant viruses M203, M204 and M205, encoding E1 with or without 1 or 3 transmembrane domains. Pigs inoculated with these recombinants developed high levels of neutralizing antibodies against PRV and HCV and were protected against both pseudorabies (Aujeszky disease) and hog cholera (swine fever). (31 ref)

10/AB/27 (Item 1 from file: 440)
DIALOG(R)File 440:Current Contents Search(R)

07878592 References: 40
TITLE: Antibody responses to hepatitis C envelope proteins in patients with acuteor chronic hepatitis C
AUTHOR(S): FournillierJacob A; Lunel F; Cahour A; Cresta P; Frangeul L; Perrin M; Girard M; Wychowski C
CORPORATE SOURCE: INST PASTEUR,UNITE VIROL MOL, 25 RUE DR ROUX/F-75724 PARIS 15//FRANCE/ (REPRINT); HOP LA PITIE SALPETRIERE,SERV VIROL/PARIS//FRANCE/
PUBLICATION TYPE: JOURNAL
PUBLICATION: JOURNAL OF MEDICAL VIROLOGY, 1996, V50, N2 (OCT), P159-167
GENUINE ARTICLE#: VQ567
PUBLISHER: WILEY-LISS, DIV JOHN WILEY & SONS INC 605 THIRD AVE, NEW YORK, NY 10158-0012
ISSN: 0146-6615
LANGUAGE: English DOCUMENT TYPE: ARTICLE

ABSTRACT: Antibody responses to the hepatitis C virus (HCV) envelope proteins El andE2 were analyzed using two original assays in sera from 86 patients in different stages of disease. A Western blot assay and an immunofluorescence assay (IFA) were developed using envelope proteins produced, respectively, inEscherichia coli and in CV1 cells infected with a recombinant SV40. As a third method, the INNO-LIA HCV Ab III assay including E2 synthetic peptides was used. Of 38 chronically infected patients positive for anti-E2 antibodies by IFA, 26 were positive in the Western blot assay (68%) and 25 in the INNO-LIA test (66%). Thus, the detection of anti-envelope antibodies is highly dependent on the antigen formulation, and a native glycosylated form of the proteins is probably needed for their efficient detection. This study shows that the antibody response to HCV envelope proteins depends on the phase of infection. A few acutely infected patients displayed a response to Elor E2 (36% by Western blot, 7% by IFA), and these antibodies seem to develop in patients evolving toward chronicity. The high prevalence in chronically infected subjects (62% to E2 by Western blot, 90% by IFA), particularly in subjects with essential mixed cryoglobulinemia (68% and 100%), confirms that the resolution of infection involves more than these antibodies. The antienvelope response in patients treated with interferon was investigated, but no significant relationship was found between antibody level prior to treatment and the evolution of hepatitis. The detection of anti-envelope antibodies, therefore, is not predictive of the response to antiviral

therapy .(C) 1998 Wiley-Liss, Inc.